

America Burning, Recommissioned: Principal Findings and Recommendations

Introduction

To a great extent, the fire problem in America remains as severe as it was 30 years ago. If progress is measured in terms of loss of life, then the progress in addressing the problem, which began with the first *America Burning* report in 1973, has come to a virtual standstill. The "indifference with which Americans confront the subject," which the 1973 Commission found so striking continues today. Yet today's fire departments, rescue squads, emergency service organizations and other first responders face expanded responsibilities and broader assignments than traditional structural fire response and suppression. To address this dilemma, the Director of the Federal Emergency Management Agency recommissioned *America Burning* in late 1999.

Since its formation, the Commission conducted four meetings and in addition to its deliberations, heard testimony and received input from approximately 30 individuals and groups, received written submissions from over 50 parties and established a website on which 191 responses were filed.

The Commission reached two major conclusions:

1. The frequency and severity of fires in America do not result from a lack of knowledge of the causes, means of prevention or methods of suppression. We have a fire "problem" because our nation has failed to adequately apply and fund known loss reduction strategies. Had past recommendations of *America Burning* and subsequent reports been implemented there would have been no need for this Commission. Unless those recommendations and the ones that follow are funded and implemented, the Commission's efforts will have been an exercise in futility.

The primary responsibility for fire prevention and suppression and action with respect to other hazards dealt with by the fire services properly rests with the states and local governments. Nevertheless, a substantial role exists for the federal government in funding and technical support.

2. The responsibilities of today's fire departments extend well beyond the traditional fire hazard. The fire service is the primary responder to almost all local hazards, protecting a community's commercial as well as human assets and firehouses are the closest connection government has to disaster-threatened neighborhoods. Firefighters, who too frequently expose themselves to unnecessary risk, and the communities they serve, would all benefit if there was the same dedication to the avoidance of loss from fires and other hazards that exists in the conduct of fire suppression and rescue operations.

A reasonably disaster-resistant America will not be achieved until there is greater acknowledgment of the importance of the fire service and a willingness at all levels of government to adequately fund the needs and responsibilities of the fire service. The lack of public understanding about the fire hazard is reflected in the continued rate of loss of life and property. The efforts of local fire departments to educate children and others must intensify. Without the integrated efforts of all segments of the community, including city and county managers, mayors, architects, engineers,

researchers, academics, materials producers and the insurance industry, as well as the fire service, there is little reason to expect that a proper appreciation of the critical role played by the fire service will materialize, in which case the necessary funding will continue to be lacking.

These conclusions underlie the findings and recommendations that follow.

Finding #1 - Implementation of Loss Prevention Strategies

The strategies and techniques to address fire risks in structures are known. When implemented, these means have proven effective in the reduction of losses. The tragic reality, however, is that existing and effective strategies have not been funded adequately by the Congress or state and local governments, nor have they been aggressively advocated by the United States Fire Administration (USFA) and other fire service constituencies. As a consequence, America today has the highest fire losses in terms of both frequency and total losses of any modern technological society. Losses from fire at the high rate experienced in America are avoidable and should be as unacceptable as deaths and losses caused by drunk driving or deaths of children accidentally killed playing with guns.

Comprehensive proposals to address structural fire risks were contained in the recommendations of the 1973 *America Burning* report. The wisdom of these recommendations was acknowledged by the Congress and the Administration in the enactment of the Federal Fire Prevention and Control Act of 1974 (the "1974 Act"). However, FEMA and the USFA have not pursued many of the preventive measures authorized by that statute; the Congress has not appropriated the funds necessary to carry them out; they have not been adequately advocated by USFA; and if implementation is the test, they have not been widely accepted by the fire service-at-large. Since 1974, successful approaches for implementing mitigation measures have been developed, but have not been incorporated in comprehensive programs to reduce structural fire loss. In addition, FEMA has not applied to the fire problem those lessons which it learned with respect to other natural hazards, including earthquake, flood, and hurricane and has failed to exercise all of its powers under the 1974 Act.

Recommendation

The Congress should increase its involvement in fire loss prevention in America, and exercise more fully its oversight responsibilities under the 1974 Act. The Congress should also appropriate for the fire problem appropriate resources commensurate with those it provides to community policing or highway safety. FEMA should exercise its full authority under the 1974 Act and should apply to the fire hazard the same prevention emphases and strategies that it has applied to other natural hazards, the Agency's objective being an all risk, multi-hazard loss prevention program.

Finding #2 - The Application and Use of Sprinkler Technology

The most effective fire loss prevention and reduction measure with respect to both life and property is the installation and maintenance of fire sprinklers. If the focus is limited to prevention and reduction of the loss of life, smoke alarms are also extremely effective. However, the use of sprinklers and smoke detectors has not been sufficiently comprehensive.

Recommendation

FEMA/USFA should develop a long-term implementation strategy for fire sprinklers and smoke alarms.

The plan should include the following implementation aspects:

- The approach should be community based;
- No tactic or strategy should detract from the requirement for sprinklers. Smoke alarms (or other measures) should always be the locality's second option as a loss reduction measure;
- Exploration of the technical, economic and practical aspects of utilizing alarm and sprinkler systems that provide automatic notification to a firehouse. These systems should be professionally maintained and monitored;
- Confirmation of the accuracy of the belief that the appropriateness of the emplacement of sprinklers and alarms may be based on rural and urban distinctions, and whether other distinctions such as residential construction, commercial construction and critical facilities may also be appropriate;
- The plan should distinguish between requirements for new construction and existing construction.
- The plan should articulate actions that will result in:
 1. Improved use of financial incentives;
 2. Government leadership in including fire safety measures in its own buildings, and in those that it helps construct or for which it provides any form of financial assistance or guarantee;
 3. Prioritization standards in the retrofit of existing buildings based on risk to the public;
 4. A national public awareness and education campaign;
 5. Participation of the private and academic sectors;
 6. Improvement of technologies and lowering of costs;
 7. Inclusion and enhancement of fire safety requirements in model building code and standards;and
- The plan should complement communities' actions to address all their hazards. For example, the ability of a community to address fire hazards should not be compromised by an earthquake event that ruptures sprinkler systems.

Finding #3 - Loss Prevention Education for the Public

The most effective way to reduce the loss of life from natural and man-made disasters is through a multi-hazard mitigation process that addresses all the hazards a community faces. Currently, FEMA has begun a community-based, all-risk program entitled, Project Impact: Building Disaster Resistant Communities. The National Fire Protection Association (NFPA) has also begun a program entitled Risk Watch, which includes many of the approaches of Project Impact.

Too many fires are caused by carelessness and ignorance of principles thought to be obvious. Education about the fire hazard should reach children who are responsible for so many accidental fires. It has been the experience of the fire services that schools are one of the best venues for firefighters in providing safety information to children and young adults. Thus, the fire services can play an important role in developing mitigation and prevention awareness programs through and in neighborhood schools. Our youngest citizens would then have the opportunity to appreciate, convey to parents and even implement life saving initiatives. A unified fire prevention curriculum should be written, tested and validated by education specialists, to provide a complete package for citizens.

Recommendation

These mitigation programs should be combined in a unified all-hazard learning curriculum and implemented nationally by community and neighborhood fire services in all levels of the local school systems. Fire departments should be encouraged to spend even more time in reaching out to children in schools and other venues. By providing a community-based and complete package to educators, fire service representatives can work from the same baseline of information to ensure that a consistent message is sent nationwide.

In addition, effective public service commercials, demonstrating the risks and avoidance techniques for fire and other hazards should be pursued. The success of such federal initiatives as seat belt use hold great promise for public education on the issues of fire.

Further findings and recommendation with respect to the issues of public education and awareness will be presented in #7 below.

Finding #4 - The Acquisition and Analysis of Data

Collection and analysis of meaningful data is critical in order to address the fire problem with respect to civilian and firefighter casualties. Analysis of data provides a basis for direction and prioritization to initiatives discussed herein.

A large quantity of data exists. However, the strategic quality and significance of much of these data are not apparent or have been questioned. The Commission is unaware that the data collected are effective for advancing or achieving the prevention goals of the fire prevention and services community. In addition, there is no central center or focus for the analysis of data that are collected. It is not clear whether the current the National Fire Incident Reporting System has cost inefficiencies with respect to data overlap or is providing corroborating data, whether there is under-utilization for data analysis

purposes, or whether there is national applicability of data that are present.

The fire and emergency services community needs a central, national data center on which to rely for the collection and analysis of data. The analysis of data should underlie funding and public policy decisions that address problems or issues identified in the data. For such a center to be effective in this role, all regions and states should participate in and contribute to the collection of relevant data. Data that are collected by any institution or organization should have utility, in both form and substance, with the data that are collected by other entities. The data received by the center should be available to outside sources.

This compatibility of data is critical and reflects the fact that there are and will continue to be many entities collecting relevant and useful data. In the future, the mutual reliance of these differing participants should become emphasized, to the point that their work has shared objectives, goals and activities.

Complete and encyclopedic data are not a pragmatic requirement in the achievement of all fire goals and objectives. The fire and emergency services community should be able to rely on state-of-the-art statistical sampling techniques to define community problems, jurisdictional challenges and the issues confronting the nation. This will provide a more efficient method of defining risk reduction efforts and formulating public policy.

As a practical and political matter, adequate financial resources will not always be provided by the Congress. However there are strategies that can be implemented to both supplement federal resources and leverage additional resources into the data collection and analysis category.

Recommendation

FEMA/USFA should develop a plan to effect appropriate data collection and analysis. The plan should include a reconciliation of existing FEMA data systems, as well as identifying adequate levels of funding needed to revive data collection, and the analysis and use of the data. Resources to achieve the plan should also be identified and pursued. The plan should include the following actions and aspects:

- FEMA and USFA should facilitate or initiate working partnerships that further efforts to institutionalize the compatibility of data on the part of allied organizations and agencies. The all hazards aspect can also be reflected by including organizations such as the Insurance Services Office (ISO), the National Fire Protection Association (NFPA), the Bureau of Alcohol, Tobacco and Firearms (ATF), the U.S. Geological Survey, the National Oceanic and Atmospheric Administration, and others.
- FEMA/USFA should also have state government partners in the collection of data. To this end, FEMA/USFA should encourage state collection of data by providing financial incentives through the grant process.
- There should be a one-time examination of the practicality of developing a statistical sampling model that can be utilized by the various regions, states and local communities as appropriate.

- For the national data center to be effective and efficient and to be adequately funded, there should be a transparent process for the setting of the agenda for the center so that problem-focused analyses can be prioritized and shared with its partners. In some instances, it may also be feasible for such partners to perform needed analyses on their own initiative.
- After-action data, which is not currently collated should be collected and analyzed by the center. Such data should identify the pre-event activities, (e.g., preventive actions, codes or standards, training) and response activities (including equipment, techniques, etc.) proved most effective.

Finding #5 - Improvements through Research

Research on the science of fire, fire behavior, the suppression and extinguishing of fire, and fire service operations is inadequate. Valuable investigation is currently being conducted in Federal Agencies, such as the Consumer Product Safety Commission and the National Institute of Standards and Technology (NIST). However, this research is not coordinated, prioritized or focused on identified problems. Valuable research is also ongoing at many of the Nation's colleges and universities and there is also a private sector component of research into fire and emergency services issues that may contribute to a national agenda.

The transfer of research results into practice can also be improved. First, technology transfer is not facilitated by the Federal sector in any efficient manner. The private sector has extensive relationships with most of the fire research community, and it is these (informal) relationships that seem to result in most of the technology transfer. Conversely, it is equally important that the end-user, the practicing fire and emergency services community, be able to communicate to the research community its problems and issues, and to directly influence research priorities.

The Commission considered this latter aspect when it evaluated the lack of empirical research results to support changes to model codes and standards. Many such changes have been based on the "equivalency" concept, and assume that the building owner is making offsetting structural improvements that obviate or reduce the need for previous fire retardant code requirements. While certain fire loss prevention components of the construction may have been researched, there reportedly has not been research into the impact of these decisions on the safety of firefighters who, if a fire did occur, would have to enter the building to conduct manual fire suppression activities.

Because of the all-hazard responsibilities of the fire services and emergency management community, the number of researchers involved grows significantly, the prioritization of needs compounds, and coordination and technology transfer becomes even more important.

The roots of the current lack of coordinated research effort may lie in the separation of certain functions between FEMA/USFA and NIST, (then the National Bureau of Standards) when FEMA was formed in 1979. However, as indicated elsewhere in this report, the character of the fire and emergency services has changed dramatically since the Fire Prevention and Control Act of 1974. Therefore reverting to the earlier research arrangements contemplated in the Act would not be appropriate.

Recommendation

FEMA/USFA should take a leadership role in setting agendas for research into fire and other risks for which the fire and emergency services community have responsibility. As a first step, a reasonable set of priorities should be established for fire issues. Research agendas should be set with significant user input and influence. In addition, partnerships among NIST and other governmental, university, international and private research organizations can be utilized to develop research agendas that include issues connected with building codes and standards.

The agendas should be followed by the development of an implementation plan that specifies the organization, institution, or private sector partner responsible for the completion of the research. Resource needs should also be identified and adequate funding should be pursued vigorously.

FEMA/USFA should not allow the development of an agenda for "fire" to become a single-hazard issue, for two important reasons. First, as stated else where in the Commission's findings and recommendations, because of the all-hazard nature of their responsibilities, the fire services have clearly become the fire and emergency services. Secondly, FEMA conducts or participates in other hazards programs -- e.g., hazardous materials, terrorism, and earthquake and other natural hazards -- that include research within the programs' activities. Within a reasonable time, the "competing" agendas of these programs should be coordinated and ultimately integrated.

With respect to the critical subject of technology transfer, the Commission understands that FEMA/USFA already does important work to make research results available, but believes that other initiatives can be pursued in order to make the process more efficient and expedient. Trade press columns, conferences or conventions, and partnerships with public and private sector organizations can be utilized to accomplish the goal. In addition, the new technologies and other results of relevant research should be incorporated into the courses and documents offered at the National Fire Academy.

Finding #6 - Codes and Standards for Fire Loss Reduction in the Built Environment

There should be an active and aggressive approach by FEMA/USFA in the utilization of building codes and standards for construction in order to prevent or reduce fire losses. To date, there has been success in the use of codes and standards. However, the success must be accelerated and intensified.

The adoption and enforcement of those codes and standards for construction or rehabilitation that affect fire safety (as well as safety for all hazards) must be extended. The Commission's discussions focused on the need to address more of the residential losses, the potential losses in existing (or new) critical facilities, and the losses in structures that contain vulnerable populations (e.g., retirement homes). Changes to model codes and standards that reflect research that validates the revisions would thus provide the technical basis for local and state adoption and enforcement of measures that address local and state risk management priorities.

The need for emphasis on residential construction is born out by statistics. For the most recently compiled year, 1997, there were 552,000 structure fires in the United States. Almost three-quarters of structure fires occurred in residential properties including homes, hotels, motels, rooming houses and dormitories. Fifty-five percent (55%) or 302,500 were in one- and two-family homes and seventeen percent (17%) or 93,000 occurred in apartments. The largest number of civilian deaths occurred in residential buildings. Eighty-three percent (83%) of the 4035 total civilian deaths occurred in home structure fires - with sixty-seven percent (67%) or 2700 in one-and two-family homes.

There are major improvements in the effectiveness and efficiency of the U.S. codes and standards system that would be realized from the joint efforts of appropriate organizations from the fire, emergency services, and building communities. The Fire Prevention and Control Act of 1974 gives USFA an important role and authority to effect this integration (from the fire services point of view) but that authority has not been exercised. The safety of new buildings, and the ongoing inspection and enforcement of those safety provisions in existing buildings, would be improved by this integration.

Recommendation

The USFA should review its authority under the Fire Prevention and Control Act of 1974 in order to identify those activities it could support, but currently does not, with respect to building codes and standards. These activities would include:

- The development and promulgation of a set of performance standards for buildings, with respect to fire hazards and risks, against which model codes and standards can be measured for equivalency. The participation and consensus processes used by FEMA to develop such standards for seismic vulnerability in buildings may serve as a useful paradigm;
- The active involvement of the fire services community in the consensus process of model code promulgation give the drafters the benefit of real experience in the prevention and suppression of fire and to ensure that the current trend towards "equivalency" does not unintentionally put firefighters at additional risk;

- The development of training courses on the enforcement of building and fire codes in new and existing buildings at the National Fire Academy (NFA) that can be handed off to state and local governments. In addition, USFA should utilize its present and emerging academic partnerships with colleges and universities that have architectural and engineering programs to ensure that fire safety inspections and code enforcement are a part of the curriculum; and
- The identification of improved or enhanced insurance incentives for community-based fire loss prevention measures and homeowner loss reduction implementation, especially fire sprinklers and alarms.

Finding #7 - Public Education and Awareness

There is wide acknowledgment and acceptance that public education programs on fire prevention are effective. The reduction of the number of fire deaths since the first America Burning report is due to a number of factors, including increased awareness that fire is not an inevitable tragedy. As with efforts to prevent or reduce losses from other hazards, such as earthquake, flood and hurricane, public education will not be totally effective on its own. Nevertheless, no prevention effort can succeed without a public education component. Social marketing techniques appear to have the greatest likelihood for success on fire issues since they seek to change the way people think and make decisions.

A public education approach should be mindful of two essential elements: first, the public education must make the target audience aware of the hazards on both an intellectual and emotional level. Second, the target audience must receive and accept the message that the hazard or problem is within its control.

Recommendation

FEMA/USFA should develop and support a public awareness campaign strategy that includes the following features:

- Measurable results, goals and objectives;
- Targeting high-risk areas with concentrated efforts and appropriate messages on public education and fire prevention;
- Use of existing community resources (e.g., schools, community groups and activities, houses of worship, and social, medical, and other education services), to deliver the message to audiences already in place;
- The development and utilization of private sector partnerships with enterprises that have investments in the reduction of fire losses, such as insurance companies, both property casualty and life and health;
- Though instituted at the national level, capable of being carried out at the local level;

- Training to prepare fire officers to deal with the media - for public information, education, and relations; and
- A multi-hazard approach that advances prevention and safety messages for all of the risks which fire departments respond to and address and that educates about the multifaceted approaches involving code enforcement, construction standards, education, and enhanced technology usage such as sprinklers and smoke detectors.

Finding #8 - National Accrediting and Certification

Fire training and education in the United States remains disparate and unequal. There are recognized standards, accreditation and certification processes, but the country still lacks a nationally recognized system envisioned by the 1973 Commission. Firefighters and officers trained in one state may have to repeat all of their training before they can serve as a firefighter in another state. Colleges and universities do not have a model curriculum upon which to base their degree programs.

Recommendation

FEMA/USFA/NFA should begin the process of establishing a system of training and education that is nationally recognized and reciprocal among the states. Participation in the system by state, local and college-based training systems should be voluntary, but USFA/NFA should provide incentives for participation.

In order to enhance distribution of USFA/NFA training, state fire training systems should be authorized to deliver USFA/NFA campus-based programs, use USFA/NFA instructors, and issue USFA/NFA certificates to students. Courses should be delivered at times and places convenient to the state systems. Though independent, state-training systems should be considered extensions of the USFA/NFA delivery system.

USFA/NFA should establish a peer-review process by which courses developed by state training systems are reviewed for endorsement by the USFA/NFA. These endorsed courses should be shared among state and local training systems. The endorsement process will increase the number of courses available to state training systems, provide local systems with courses on subjects that meet local needs, and begin the process of establishing a national system of training and education envisioned by the original America Burning Commission.

The process by which courses are "handed off" to state training systems should be re-engineered. The focus should be on getting USFA/NFA developed courses into state and local training systems more quickly and involving instructors in the course revision/edits process.

The number of technology based courses should be increased. CD and Internet technologies should be utilized to reduce the amount of paper based materials currently printed, stored and shipped to State and local training systems.

As an additional incentive to the establishment of the course development and reciprocity system,

performance-based training grants should be made to State systems to permit them to deliver USFA/NFA residential and endorsed courses.

Participation by colleges and universities in the national fire prevention efforts should be expanded and a group of colleges and universities should be convened to help design a model curriculum.

Finding #9 - Firefighter Health and Safety

It is evident that a key element in the reduction or prevention of the loss of life and property at a fire emergency is a properly organized, staffed and deployed fire department. A fire emergency is a time sensitive and labor intensive task. Many fire departments in the United States today do not have the capacity to provide all the requisite functions required for an initial first alarm response in a timely manner.

Moreover, as noted elsewhere in the Commission's Findings and Recommendations, Firefighters respond to all hazardous incidents in a community not only fires. Firefighters respond to over a quarter of a million hazardous material incidents each year in the US. They are tasked with protecting the public during and after an incident involving weapons of mass destruction. They perform rescue operations in a multitude of circumstances ranging from natural disasters to voluntary endangerment by ultimate sports participants. Training for these operations is frequently substandard where it exists. Worse, it is usually absent in key areas such as safety for firefighters from hazards external to the incident-site (e.g., high-speed traffic at the site of a highway accident) and responder health and safety with respect to the causative hazard (e.g., appropriate equipment for response to a hazardous materials incident).

Fire departments are also now called upon to provide emergency medical response at various levels from first responder to advanced life support and transport. Existing EMS response systems, including some under the fire service, often provide inconsistent emergency medical response coverage, are understaffed and under trained, and do not deploy and arrive at medical emergencies within medically accepted response times.

Thousands of fire fighters and emergency medical personnel lack rudimentary medical evaluation and wellness/fitness programs that can dramatically work to ameliorate the negative effects of emergency response and toxic exposure. Too many fire fighters and paramedics suffer from cancer as the result of chronic exposure to toxic products of combustion and the numbers continue to increase. Additionally, each year more firefighters are exposed to infectious diseases during the provision of basic and advanced life support in uncontrolled, emergency environments.

Protective clothing and equipment utilized by fire fighters and emergency medical personnel are not always properly selected, used, and maintained. Inferior products are still sold to and procured by fire departments.

Recommendation

Communities that fund professional fire departments to respond to fire emergencies within their jurisdiction should be fully cognizant of the capacity of the department in terms of its deployment

capability, including structural fire response, special operations and hazardous materials response, and emergency medical response. Fire departments should be evaluated based on their effectiveness, efficiency and worker safety. The decision of the jurisdictions' level of service should be based on technically, scientifically and medically sound criteria for organization, staffing and deployment of such services. Fire fighters and emergency medical personnel should be selected for the job based on consistent medical and performance standards.

All fire departments should provide protective clothing and equipment as well as specific training for the prevention of occupational acquired infectious diseases, cancer, heart disease and other occupationally related diseases. Such clothing and equipment must provide continual protection during its use against the hazardous conditions encountered during fire fighting, emergency medical and special operation functions.

FEMA/USFA should directly support or advocate the development of nationally applicable assessment and evaluation systems on the full range of operating capabilities and capacities of public fire departments. Such systems should be adopted, and if necessary promulgated by the appropriate federal agency. The evaluation system should be based on the minimum functions and tasks required for fire, medical or other emergencies, as well as the minimum response times required to deliver such services, and should measure the effectiveness and efficiency of public fire suppression, emergency medical services, and special operations delivery in protecting both the public and the occupational safety and health of fire department employees.

FEMA/USFA and other appropriate federal agencies should encourage all fire departments to adopt a standard operating procedure addressing safe incident-site staffing that includes accountability and teams for fire fighter rescue.

Fire departments should provide a wellness/fitness program to maintain the medical, physical and behavioral health of all personnel. The federal government should provide funding for fire department adoption of fire fighter wellness/fitness programs based on the Wellness-Fitness Initiative and the Candidate Physical Ability Test of the International Association of Fire Fighters and the International Association of Fire Chiefs.

The federal government should also provide funding for training, equipping and staffing of fire department special operations, including hazardous materials, technical rescue and terrorist/weapons of mass destruction response.

The subject of problem-focused research activities, supported by the federal government, has been addressed elsewhere in these findings and recommendations. A critical component of such research should be the funding of additional research in fire fighter protective clothing and equipment. Appropriate government agencies should also provide consistent certification, testing, field research and when necessary, product recall of all fire fighter protective clothing and equipment.

Finding # 10 - Emergency Medical Services

As discussed earlier, today's fire services confront the full range of hazards and risks for America's

communities. Primary emergency medical response to incidents that require rescue operations has become a dominant role of the fire services. In the last ten years, Emergency Medical Services (EMS), ranging from primary response to advanced life support, have grown to occupy a particularly unique and prominent position -- virtually the "gate-keepers" of the health and medical service when trauma or emergency are involved. Emergency Medical Technicians (EMT's) and Paramedics have a greater level of training than ever before and are as much a part of the health care environment as they are of the firefighter environment.

Not all fire departments and their employees have welcomed the larger role of EMS. Emergency medical response often requires significant financial resources for each emergency call, regardless of the number and nature of medical emergencies that necessitated the call. In addition, the personal and interpersonal skills needed for EMS often differ sharply from those needed to suppress a structural fire. This aspect has hindered the professional development of many in the fire services, both career and volunteer, with respect to their EMS responsibilities.

The budgets in many fire departments favor fire suppression at the expense of EMS, particularly in the area of training. EMS systems often provide inconsistent response because of this insufficient training as well as insufficient staffing. The result too often is a failure to deploy and arrive at a medical emergency within medically acceptable response times.

Federal support currently provided to the fire services' EMS component is inadequate and EMS suffers from a lack of broad programmatic support and close working relationships with the health care and health insurance industries.

Recommendation

Support for EMS should include advocacy, improved training and equipment, research and data improvements. Strategies should be implemented that improve the practical equality of EMS within the fire service. Simply put, EMS should be adequately funded and staffed. Achieving this adequacy is the joint responsibility of government and the health care system. Emergency medical service delivery should be consistent with medically acceptable response times through the deployment of sufficient numbers of trained personnel. Fire departments should be accountable for activities conducted at the defined incident location as well as for other emergency location safety, including the provision of adequate personnel prior to the commencement of operations.

Each fire department, volunteer and career alike, should assess the EMS training needs of its current staffing. Training programs that treat career and volunteer members differently should be eliminated. Training policies that allow senior members to avoid enhanced training when newer members must obtain it should also be eliminated.

FEMA should review the collective support provided by the federal sector to the EMS activity of communities' fire departments and, based on a needs assessment, determine whether that support can be revised in order to enhance the EMS capability of these departments.

FEMA should facilitate the development of a working partnership among the health care industry, the health insurance industry, and the fire services with the goal of enhancing the provision of emergency medical services to the public and improving the efficiency and effectiveness of the health service industry.

Finding # 11 - Diversity

Today's fire service has a diverse membership. Through the initiation of public policies intended to enhance the diversity of community fire departments, the face of the fire service in most metropolitan areas has changed significantly since the publication of *America Burning* in 1973. The fire service today is more inclusive of minorities and women. There has been a giant leap forward from the era in which minority representation was limited to certain stations in certain areas and there were no women firefighters. However, although the overall membership of the fire service has become more diverse, there are still a number of fire departments in which diversity does not exist or where there are barriers that limit either the upward or lateral mobility of minorities and women, irrespective of merit. There is still much to be done in building diversity into the service's organizational structure and the agenda of the emergency services.

Surveys clearly show that the most trusted societal element of today's villages, towns, cities and counties are the members of the fire services. Fire service departments and organizations have the closest personal relationship with the neighborhoods in which they operate and should be extremely reflective of our communities. Much of the strength of the fire and emergency services derives from their acceptance by the communities and neighborhoods they serve. This strength is enhanced to the extent that the fire services reflect the make-up of the community they serve.

Recommendation

In order to improve fairness and diversity within the fire services, there should be a commitment to alter traditional attitudes with respect to the activities that are most important to the fire services. There should be recognition for those leaders and departments that effectively put an end to those traditions that limit evolution toward a diverse fire and emergency services organization.

Such leaders should establish policies and practices that improve the lateral and upward mobility of all, based on merit, and should enhance the connection of the firehouses to their neighborhoods. Both firefighters and their organizational management representatives should address the issues of fairness to all employees within their organizations.

The conduct of activities and initiatives that are intended to diminish improper imbalances with respect to diversity within a fire department should also be directed outside of the department, toward the community and the neighborhood. Fire plans and general response plans that are developed for the community should anticipate the additional concerns and challenges that occur in diverse communities, such as communication challenges, requirements for faith-related practices, societal habits and mores, and safety requirements. In addition, diversity should be considered in the conduct of prevention and preparedness activities, not only to anticipate the concerns that will arise in the response environment, but also to take advantage of the diversity achieved within the department and enhance the effectiveness of prevention and preparedness messages.

Finding #12 - Burn Injuries and Care

The trauma caused by burn injuries to civilians and firefighters is well understood within the medical community. Prompt treatment of a burn victim at a burn center as opposed to most hospitals usually is the difference between life and death. Burn survival has improved significantly over the past thirty years. On a yearly basis, deaths, once the victim has been placed into the burn care system, have decreased from around 4000 to 1000. Today, over 100 centers provide burn care, with 25 of them being full service burn treatment, research and rehabilitation. In comparison, only 12 facilities then were capable of offering a full spectrum of burn care treatment when the original *America Burning* report was issued.

Unfortunately, the current trend in burn care treatment, research and rehabilitation services indicates the progress has stagnated and in many respects regressed in medical research and available treatments. The Commission heard testimony that economics are discouraging many hospitals from continuing their emphasis on burn treatment. The high cost to hospitals of burn treatment and limitations on reimbursement under many existing insurance policies is currently driving down the quality and quantity of burn treatment facilities. However shortsighted this approach may be, it still exists.

Moreover, the United States has not given priority to either the broad distribution of information or the development of the technology to treat burn victims in a comprehensive manner. The federal government has actually decreased its financial investment in burn injury issues and fewer federal burn facilities exist today than did in 1973.

Recommendation

Prompt and comprehensive care for the burn victim is essential, benefiting not only the victim, but society as a whole. This care should not be limited to the physical needs of the victim alone, but should be expanded to consider the mental and emotional needs of the victim and his or her family, friends, and often times, co-workers.

FEMA and the United States Fire Administration should build partnerships that will support both the prevention and care giving and expand the capability to manage all aspects of burn-related issues.

With regard to treatment, these partnerships:

- should include advocating within the health industry the needs of victims. This advocacy should impress on insurers the benefits of immediate and comprehensive treatment as contrasted with the alternative costs of delays caused by inadequate insurance coverage;
- should lead to the maintenance of training centers, the development of programs to recruit and retain burn physicians and nurses, and an increase in federal research such as that once provided by Brook Army Medical Center.